

ABSTRACT

The present invention provides a spin finish for elastic fibers which comprises an amphoteric surfactant and/or a cationic surfactant as well as a base oil and has a surface tension thereof at 25°C of 14 to 35 mN/m and a volume resistivity thereof at 20°C of 1×10^7 to $1 \times 10^{13} \Omega \cdot \text{cm}$;

a spin finish for elastic fibers which comprises an ionic surfactant and a base oil and has a surface tension (S) thereof at 25°C of 14 to 22.5 mN/m and a volume resistivity (ρ) thereof at 20°C of 1×10^7 to $1 \times 10^{13} \Omega \cdot \text{cm}$, ρ and S satisfying the following relation [1];

$$\rho \leq 1 \times 10^{(-2.4S + 61)} \quad [1]$$

a spin finish for elastic fibers which comprises a quaternary ammonium salt of the specific composition, a base oil and a higher fatty acid (C_{5-30}) metal salt powder;

a method of treating an elastic fiber which comprises providing an elastic fiber with any of the above spin finish for elastic fibers in an amount of 0.1 to 12% by weight of said fiber;

and an elastic fiber which is obtainable by the above treatment method.